

Serial No. 09/900,400  
Amendment Dated June 6, 2003

Attorney Docket No. F0541  
Response To Office Action Dated March 6, 2003

#### REMARKS

Claims 1-8 and 17 were previously pending. Claims 1-3 have been amended. Claim 17 has been cancelled without prejudice or disclaimer. Claims 18-20 have been added. Following entry of this amendment, claims 1-8 and 18-20 will be pending.

### I. REJECTION OF CLAIMS UNDER 35 USC §103(a)

Claims 1-8 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,159,778 issued to Kim ("Kim") in view of U.S. Patent No. 5,245,208 issued to Eimori ("Eimori"). Claim 17 has been canceled thereby rendering moot this rejection with regard to claim 17. Withdrawal of the rejection with respect to claims 1-8 is respectfully requested for at least the following reasons.

Claim 1 as amended includes, *inter alia*, the feature "a semiconductor active region disposed directly on the insulator layer" (emphasis added). Further, as illustrated in FIG. 1 of the present specification and reproduced below for the Examiner's convenience, amended claim 1 recites a semiconductor-on-insulator (SOI) device 10 (annotation added). The SOI device 10 includes a semiconductor substrate layer 18; an insulator layer 16 disposed on the substrate layer 18 and a semiconductor active region 14 disposed directly on the insulator layer 16 (annotations added).

The active region 14 includes a source 30, a drain 32, and a body 34 disposed therebetween. Further, the source 30 and body 34 forming an abrupt or hyperabrupt source/body junction 40 (annotation added).

The SOI device 10 also includes a gate 46 disposed on the body 34 such that the gate 46, source 30, drain 32 and body 34 are operatively arranged to form a transistor. Additionally, the SOI device 10 includes an implanted region 60 (annotation added) forming at interface between the body 34 and the drain 32, the implanted region providing a graded drain/body junction 42 (annotation added) that is disposed at least partially under the gate 46. (See, for example, FIG. 1 and page 3, line 9 through page 5, line 8).

Serial No. 09/900,400  
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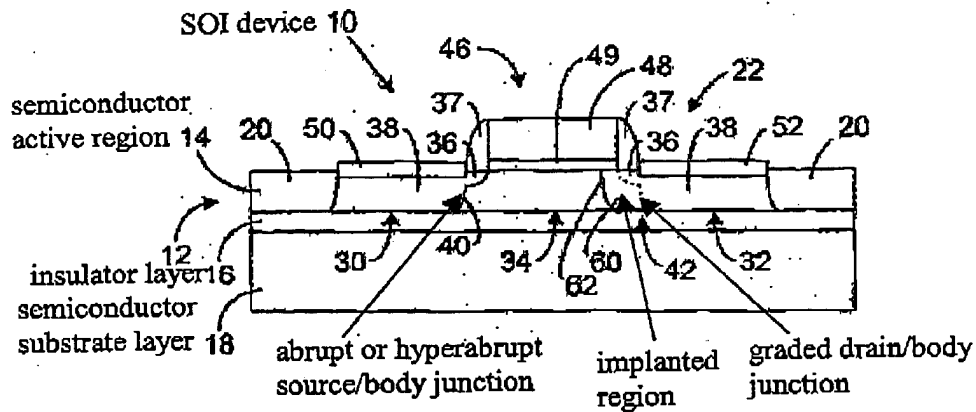


Figure 1: FIG. 1 of Present Specification

Referring now to FIG. 1 of Kim also reproduced below for the Examiner's convenience, Kim discloses an SOI FET. The SOI FET includes an electrically insulating substrate 18 and 20 (annotations added), a semiconductor region 10 (annotation added) on the electrically insulating substrate 18 and 20, a field effect transistor having source 24a and 26a, drain 24b and 26b (annotation added) and channel 27 regions in the semiconductor region 10 and a metal silicide region 16 (annotation added) between the electrically insulating substrate 18 and 20 and the semiconductor region 10, i.e., source 24a and 26a and a portion of channel 27. (See, for example, the Abstract, FIG. 1 and Col. 3, lines 6-12).

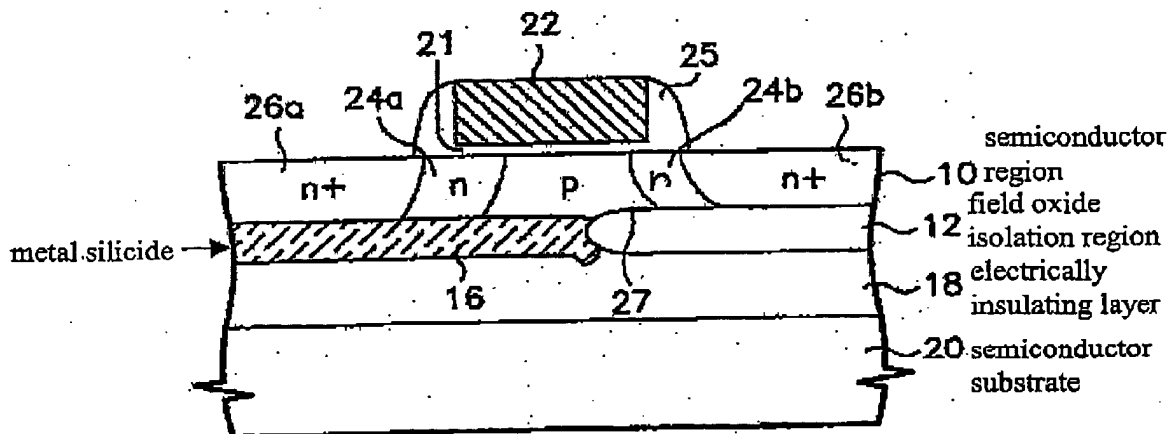


Figure 2: FIG. 1 of Kim

Serial No. 09/900,400  
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Response To Office Action Dated March 6, 2003

Kim does not disclose the silicon layer 10 disposed directly on the electrically insulating layer 18 as claimed in amended claim 1. To the contrary, Kim discloses a refractory metal silicide layer 16 is provided between the electrically insulating layer 18 and the channel and source regions 24a and 26a, as illustrated (see, for example, the Abstract, FIG. 1 and Col. 3, lines 23-40). Further, Kim does not disclose the source and body forming an abrupt or hyperabrupt source/body junction and an implanted region at an interface between the body and the drain, the implanted region providing a graded drain/body junction as claimed in amended claim 1.

Accordingly, claims 1-8 are patentable over Kim for at least the reasons stated above. Further, Eimori does not make up for the deficiencies of Kim. That is, Eimori does not disclose a semiconductor active region disposed directly on the insulator layer. Further, Eimori does not disclose the source and body forming an abrupt or hyperabrupt source/body junction and an implanted region at an interface between the body and the drain, the implanted region providing a graded drain/body junction as claimed in amended claim 1.

Therefore, since Kim alone or in combination with Eimori does not teach or suggest one or more of the features as claimed in amended claim 1, claims 2 and 8 that depend therefrom are believed to be in condition for allowance for at least the reasons stated above.

## II. NEW CLAIMS

The newly added claims, i.e., claims 18-20, claim additional novel and unobvious features of the present invention. The features of claims 18-20 are supported by the specification and no new matter is believed to be added. (See, for example, FIGS. 1-2, page 5, lines 6-8, page 5, lines 9-14 and page 6, lines 9-12. Further, claims 18-20 depend directly or indirectly from amended claim 1. Therefore, claims 18-20 are believed to be allowable for at least the reasons stated above with regards to amended claim 1.

## III. CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the

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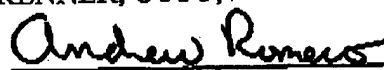
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application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present invention.

If there is any additional fee(s) resulting from this communication, please charge same to our Deposit Account No. 18-0988; Our Order No. F0541(AMDSP0433US).

Respectfully submitted,

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